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TECH CENTER 1600/2900



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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/038,271

DATE: 02/07/2002

TIME: 18:52:01

Input Set : N:\Crif3\RULE60\10038271.txt

Output Set: N:\CRF3\02072002\J038271.raw

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TECH CENTER 1600/2900

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5 <110> APPLICANT: Fallaux, Frits J.
7   Hoeben, Robert C.
9   Bout, Abraham
11  Valerio, Domenico
13  Van der Eb, Alex J.
16 <120> TITLE OF INVENTION: PACKAGING SYSTEMS FOR HUMAN RECOMBINANT ADENOVIRUS TO BE
USED IN
18   GENE THERAPY
21 <130> FILE REFERENCE: 3833.1US
24 <140> CURRENT APPLICATION NUMBER: 10/038,271
26 <141> CURRENT FILING DATE: 2001-10-23
28 <150> PRIOR APPLICATION NUMBER: 09/333,820
30 <151> PRIOR FILING DATE: 1999-06-15
32 <150> PRIOR APPLICATION NUMBER: US 08/793,170
34 <151> PRIOR FILING DATE: 1997-03-25
37 <150> PRIOR APPLICATION NUMBER: PCT/NL96/00244
39 <151> PRIOR FILING DATE: 1996-06-14
42 <150> PRIOR APPLICATION NUMBER: EP 95201728.3
44 <151> PRIOR FILING DATE: 1995-06-26
47 <150> PRIOR APPLICATION NUMBER: EP 95201611.1
49 <151> PRIOR FILING DATE: 1995-06-15
52 <160> NUMBER OF SEQ ID NOS: 22
55 <170> SOFTWARE: Corel WordPerfect 8.0
59 <210> SEQ ID NO: 1
61 <211> LENGTH: 21
63 <212> TYPE: DNA
65 <213> ORGANISM: Artificial Sequence
68 <220> FEATURE:
W--> 70 <221> NAME/KEY:
72 <222> LOCATION:
74 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Ea-1
77 <400> SEQUENCE: 1
79   cgtgtagtgt atttataccc g                               21
82 <210> SEQ ID NO: 2
84 <211> LENGTH: 21
86 <212> TYPE: DNA
88 <213> ORGANISM: Artificial Sequence
91 <220> FEATURE:
W--> 93 <221> NAME/KEY:
95 <222> LOCATION:
97 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Ea-2
100 <400> SEQUENCE: 2
102   tcgtcactgg gtggaaagcc a                               21
105 <210> SEQ ID NO: 3

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107 <211> LENGTH: 21
109 <212> TYPE: DNA
111 <213> ORGANISM: Artificial Sequence
115 <220> FEATURE:
W--> 117 <221> NAME/KEY:
119 <222> LOCATION:
121 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Ea-3
124 <400> SEQUENCE: 3
126      taccgcgcgt cctaaatgg c                                21
129 <210> SEQ ID NO: 4
131 <211> LENGTH: 20
133 <212> TYPE: DNA
135 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
W--> 140 <221> NAME/KEY:
142 <222> LOCATION:
144 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Ea-5
147 <400> SEQUENCE: 4
149      tggacttgag ctgtaaacgc                                20
152 <210> SEQ ID NO: 5
154 <211> LENGTH: 21
156 <212> TYPE: DNA
158 <213> ORGANISM: Artificial Sequence
161 <220> FEATURE:
W--> 163 <221> NAME/KEY:
165 <222> LOCATION:
167 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Ep-2
171 <400> SEQUENCE: 5
173      gcctccatgg aggtcagatg t                                21
176 <210> SEQ ID NO: 6
178 <211> LENGTH: 20
180 <212> TYPE: DNA
182 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
W--> 187 <221> NAME/KEY:
189 <222> LOCATION:
191 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Eb-1
194 <400> SEQUENCE: 6
196      gcttgagccc gagacatgtc                                20
199 <210> SEQ ID NO: 7
201 <211> LENGTH: 24
203 <212> TYPE: DNA
205 <213> ORGANISM: Artificial Sequence
208 <220> FEATURE:
W--> 210 <221> NAME/KEY:
212 <222> LOCATION:
214 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Eb-2
217 <400> SEQUENCE: 7
219      cccctcgagc tcaatctgta tctt                                24

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222 <210> SEQ ID NO: 8
224 <211> LENGTH: 27
226 <212> TYPE: DNA
228 <213> ORGANISM: Artificial Sequence
231 <220> FEATURE:
W--> 233 <221> NAME/KEY:
235 <222> LOCATION:
237 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer SV40-1
240 <400> SEQUENCE: 8
242      ggggggatccg aacttggtta ttgcagc                                27
245 <210> SEQ ID NO: 9
247 <211> LENGTH: 25
249 <212> TYPE: DNA
251 <213> ORGANISM: Artificial Sequence
254 <220> FEATURE:
W--> 256 <221> NAME/KEY:
258 <222> LOCATION:
260 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer SV40-2
263 <400> SEQUENCE: 9
265      gggagatcta gacatgataa gatac                                25
268 <210> SEQ ID NO: 10
270 <211> LENGTH: 27
272 <212> TYPE: DNA
274 <213> ORGANISM: Artificial Sequence
277 <220> FEATURE:
W--> 279 <221> NAME/KEY:
281 <222> LOCATION:
283 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Ad5-1
286 <400> SEQUENCE: 10
288      gggagatctg tactgaaatg tgtgggc                                27
291 <210> SEQ ID NO: 11
293 <211> LENGTH: 24
295 <212> TYPE: DNA
297 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
W--> 302 <221> NAME/KEY:
304 <222> LOCATION:
306 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer Ad5-2
309 <400> SEQUENCE: 11
311      ggaggtgca gtctccaacg gcgt                                24
314 <210> SEQ ID NO: 12
316 <211> LENGTH: 27
318 <212> TYPE: DNA
320 <213> ORGANISM: Artificial Sequence
323 <220> FEATURE:
W--> 325 <221> NAME/KEY:
327 <222> LOCATION:
329 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer ITR1
332 <400> SEQUENCE: 12

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PATENT APPLICATION: US/10/038,271

TIME: 18:52:01

Input Set : N:\Crf3\RULE60\10038271.txt

Output Set: N:\CRF3\02072002\J038271.raw

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334      gggggatcct caaatcgta cttccgt                27
337 <210> SEQ ID NO: 13
339 <211> LENGTH: 27
341 <212> TYPE: DNA
343 <213> ORGANISM: Artificial Sequence
346 <220> FEATURE:
W--> 348 <221> NAME/KEY:
350 <222> LOCATION:
352 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer ITR2
355 <400> SEQUENCE: 13
357      ggggtctaga catcatcaat aatatac                27
360 <210> SEQ ID NO: 14
362 <211> LENGTH: 32
364 <212> TYPE: DNA
366 <213> ORGANISM: Artificial Sequence
369 <220> FEATURE:
W--> 371 <221> NAME/KEY:
373 <222> LOCATION:
375 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR primer PCR/MLP1
378 <400> SEQUENCE: 14
380      ggcgaattcg tcgacatcat caataatata cc          32
383 <210> SEQ ID NO: 15
385 <211> LENGTH: 32
387 <212> TYPE: DNA
389 <213> ORGANISM: Artificial Sequence
392 <220> FEATURE:
W--> 394 <221> NAME/KEY:
396 <222> LOCATION:
398 <223> OTHER INFORMATION: Description of Artificial Sequence: PCT primer PCR/MLP2
401 <400> SEQUENCE: 15
403      ggcgaattcg gtaccatcat caataatata cc          32
406 <210> SEQ ID NO: 16
408 <211> LENGTH: 17
410 <212> TYPE: DNA
412 <213> ORGANISM: Artificial Sequence
415 <220> FEATURE:
W--> 417 <221> NAME/KEY:
419 <222> LOCATION:
421 <223> OTHER INFORMATION: Description of Artificial Sequence: PCT primer PCR/MLP3
424 <400> SEQUENCE: 16
426      ctgtgtacac cggcgca                17
430 <210> SEQ ID NO: 17
432 <211> LENGTH: 50
434 <212> TYPE: DNA
436 <213> ORGANISM: Artificial Sequence
439 <220> FEATURE:
W--> 441 <221> NAME/KEY:
443 <222> LOCATION:
445 <223> OTHER INFORMATION: Description of Artificial Sequence: PCT primer HP/aspl

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## RAW SEQUENCE LISTING

DATE: 02/07/2002

PATENT APPLICATION: US/10/038,271

TIME: 18:52:01

Input Set : N:\Crf3\RULE60\10038271.txt

Output Set: N:\CRF3\02072002\J038271.raw

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448 <400> SEQUENCE: 17
450      gtacactgac ctagtgccgc ccgggcaaag cccgggcggc actaggtcag      50
453 <210> SEQ ID NO: 18
455 <211> LENGTH: 50
457 <212> TYPE: DNA
459 <213> ORGANISM: Artificial Sequence
462 <220> FEATURE:
W--> 464 <221> NAME/KEY:
466 <222> LOCATION:
468 <223> OTHER INFORMATION: Description of Artificial Sequence: PCT primer HP/asp2
471 <400> SEQUENCE: 18
473      gtacctgacc tagtgccgcc cgggctttgc cccgggcggca ctaggtcagt      50
476 <210> SEQ ID NO: 19
478 <211> LENGTH: 55
480 <212> TYPE: DNA
482 <213> ORGANISM: Artificial Sequence
485 <220> FEATURE:
W--> 487 <221> NAME/KEY:
489 <222> LOCATION:
491 <223> OTHER INFORMATION: Description of Artificial Sequence: PCT primer HP/clal
494 <400> SEQUENCE: 19
496      gtacattgac ctagtgccgc ccgggcaaag cccgggcggc actagggtcaa tcgat      55
499 <210> SEQ ID NO: 20
501 <211> LENGTH: 55
503 <212> TYPE: DNA
505 <213> ORGANISM: Artificial Sequence
508 <220> FEATURE:
W--> 510 <221> NAME/KEY:
512 <222> LOCATION:
514 <223> OTHER INFORMATION: Description of Artificial Sequence: primer HP/cia2
517 <400> SEQUENCE: 20
519      gtacatcgat tgacctagtg ccgcccgggc ttgcccggg cggcactagg tcaat      55
522 <210> SEQ ID NO: 21
524 <211> LENGTH: 5620
526 <212> TYPE: DNA
528 <213> ORGANISM: Artificial Sequence
531 <220> FEATURE:
W--> 533 <221> NAME/KEY: Ad5 left terminus
535 <222> LOCATION: 1..457
538 <221> NAME/KEY: enhancer
540 <222> LOCATION: 458..969
543 <221> NAME/KEY: exon
545 <222> LOCATION: 970..1204
548 <221> NAME/KEY: gene
550 <222> LOCATION: 1218..2987
553 <221> NAME/KEY: polyA_signal
555 <222> LOCATION: 3018..3131
W--> 558 <221> NAME/KEY: pUC12 backbone
560 <222> LOCATION: 3132..5620

```

## VERIFICATION SUMMARY

DATE: 02/07/2002

PATENT APPLICATION: US/10/038,271

TIME: 18:52:02

Input Set : N:\Crif3\RULE60\10038271.txt

Output Set: N:\CRF3\02072002\J038271.raw

L:70 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1  
L:93 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:2  
L:117 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3  
L:140 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4  
L:163 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:5  
L:187 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6  
L:210 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:7  
L:233 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:8  
L:256 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:9  
L:279 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10  
L:302 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:11  
L:325 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:12  
L:348 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:13  
L:371 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:14  
L:394 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15  
L:417 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:16  
L:441 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:17  
L:464 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:18  
L:487 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:19  
L:510 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:20  
L:533 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:21  
L:558 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:21